

GURUKULA KANGRI (DEEMED TO BE) UNIVERSITY

Haridwar, Uttarakhand

INTERNAL QUALITY ASSURANCE CELL (IQAC)

ALUMNI FEEDBACK ON CURRICULUM

COMPREHENSIVE ANALYSIS REPORT

Academic Year	AY 2023-24 (July 2023 – June 24)
Survey Period	10 Jul 2023 22:22:29 → 02 Nov 2023 12:47:34
Total Respondents	93 Alumni
Departments Covered	7 Departments
University Overall Score	3.44 / 5.00 (Average)
Report Generated	10 June 2026 at 11:04:29 IST
NAAC Reference	Criterion 1 — Curricular Aspects Sub-Criteria 1.2, 1.3

1. EXECUTIVE SUMMARY

The Internal Quality Assurance Cell (IQAC) of Gurukula Kangri (Deemed to be) University, Haridwar, conducted a comprehensive Alumni Feedback Survey on Curriculum for AY 2023-24. A total of 93 alumni responses were collected across 7 academic departments.

The survey measured seven critical curriculum parameters on a five-point scale (Poor=1 to Excellent=5): Entrepreneurship Fostering, Career Orientation, Industry-Academia Gap Bridging, Communication Skills, Electives & Technological Advancements, Analytical Abilities, and Adequateness of Courses.

The university-wide average score stands at 3.44 out of 5.00 (Average), with significant variation across departments.

2. UNIVERSITY-LEVEL SCORE SUMMARY

2.1 Average Scores by Criterion

S.No	Parameter	Weighted Avg (/5)	Rating	Criterion Performance
1	Entrepreneurship	3.28	Average	Needs Attention
2	Career Orientation	3.56	Satisfactory	Adequate
3	Industry-Academia Gap	3.38	Average	Needs Attention
4	Communication Skills	3.38	Average	Needs Attention
5	Electives & Technology	3.52	Satisfactory	Adequate
6	Analytical Abilities	3.42	Average	Needs Attention
7	Adequateness of Courses	3.56	Satisfactory	Adequate

2.2 Cross-Departmental Score Comparison

Department	n	Entrep	Career	Ind-Aca	Comm	Elec.	Analyt	Adeq.	Overall
Electronics & Communication Engineering	36	3.28	3.42	3.25	3.36	3.56	3.28	3.53	3.38
Chemistry	16	3.69	4.31	4.06	3.75	3.75	3.94	3.94	3.92
Zoology & Environmental Science	8	2.88	2.88	3.00	2.88	2.62	2.62	2.62	2.79
Botany & Microbiology	8	2.75	2.88	3.12	3.12	3.00	3.00	3.25	3.02
Mathematics & Statistics	8	3.38	4.12	3.50	3.38	3.88	3.75	3.75	3.68
Mechanical Engineering	6	2.83	2.83	3.33	3.00	3.50	3.33	3.67	3.21
Computer Science & Engineering	5	3.40	3.60	3.20	3.40	4.00	3.40	3.80	3.54

Color coding: Score ≥ 4.0 shown in green (Good), ≥ 3.5 in blue (Satisfactory), ≥ 3.0 in amber (Average), < 3.0 in red (Needs Improvement)

3. DEPARTMENT-WISE ANALYSIS AND RECOMMENDATIONS

3.1 Electronics & Communication Engineering

Programmes	BTech (ECE)	Respondents	36 alumni
Overall Score	3.38 / 5.00	Rating	Average

Parameter	Score (/5)	Assessment
Entrepreneurship	3.28	Average
Career Orientation	3.42	Average
Industry-Academia Gap	3.25	Average
Communication Skills	3.36	Average
Electives & Technology	3.56	Satisfactory
Analytical Abilities	3.28	Average
Adequateness of Courses	3.53	Satisfactory

Key Findings

Strengths: Core subjects like Analog Electronics, Digital Electronics, and Circuit Design appreciated. Alumni at IITs and MNCs.

Weaknesses: Industry-academia gap and entrepreneurship rated lowest. Weak placement in core electronics. Limited VLSI, PCB practical exposure.

Alumni Suggestions for New Courses/Topics

Add AI/ML, Cyber Security, VLSI, Verilog HDL, 5G/6G, PCB design lab, DevSecOps.

Recommended Corrective Actions

- Introduce VLSI Design and Verilog HDL as core/elective courses
- Add PCB Design Laboratory as a practical course
- Mandate one NPTEL certification per semester with credit transfer
- Include AI/ML and Cyber Security as electives
- Organize internship drives for core electronics companies
- Invite alumni in industry for regular guest lectures

4.2 Chemistry

Programmes	MSc (Chemistry), PhD (Chemistry)	Respondents	16 alumni
Overall Score	3.92 / 5.00	Rating	Satisfactory

Parameter	Score (/5)	Assessment
Entrepreneurship	3.69	Satisfactory
Career Orientation	4.31	Good
Industry-Academia Gap	4.06	Good

Communication Skills	3.75	Satisfactory
Electives & Technology	3.75	Satisfactory
Analytical Abilities	3.94	Satisfactory
Adequateness of Courses	3.94	Satisfactory

Key Findings

Strengths: Career orientation and industry-academia gap highly rated. Alumni placed in pharma, government labs, and academia. Industrial chemistry syllabus historically distinguished.

Weaknesses: Entrepreneurship lowest-rated. Limited access to modern analytical instruments.

Alumni Suggestions for New Courses/Topics

Add advanced instrumentation, synthetic organic chemistry, food chemistry.

Recommended Corrective Actions

- Procure modern analytical instruments (NMR, HPLC, GC-MS)
- Revise syllabus with pharmaceutical and food chemistry perspective
- Introduce Synthetic Organic Chemistry as advanced elective
- Make one-month industrial training mandatory
- Enhance placement cell outreach to pharma MNCs

5.3 Zoology & Environmental Science

Programmes	MSc (Environmental Science), PhD	Respondents	8 alumni
Overall Score	2.79 / 5.00	Rating	Below Average

Parameter	Score (/5)	Assessment
Entrepreneurship	2.88	Below Average
Career Orientation	2.88	Below Average
Industry-Academia Gap	3.00	Average
Communication Skills	2.88	Below Average
Electives & Technology	2.62	Below Average
Analytical Abilities	2.62	Below Average
Adequateness of Courses	2.62	Below Average

Key Findings

Strengths: EIA and ETP/STP knowledge valued. Faculty cooperation appreciated.

Weaknesses: Multiple dimensions rated below 3.0. No MTech Environmental Engineering. Gender equity concerns raised.

Alumni Suggestions for New Courses/Topics

Start MTech Environmental Engineering; add GIS, ESG/Sustainability; update advanced syllabus topics.

Recommended Corrective Actions

- Introduce MTech Environmental Engineering programme
- Add GIS as mandatory elective
- Include ESG and Sustainability modules
- Address gender discrimination concerns through policy review
- Strengthen industry linkages with EHS-focused companies

6.4 Botany & Microbiology

Programmes	MSc (Microbiology), BSc (Bio)	Respondents	8 alumni
Overall Score	3.02 / 5.00	Rating	Average

Parameter	Score (/5)	Assessment
Entrepreneurship	2.75	Below Average
Career Orientation	2.88	Below Average
Industry-Academia Gap	3.12	Average
Communication Skills	3.12	Average
Electives & Technology	3.00	Average
Analytical Abilities	3.00	Average
Adequateness of Courses	3.25	Average

Key Findings

Strengths: Core microbiology and biochemistry appreciated. Practical lab work valued.

Weaknesses: Career orientation weakest. Lack of modern molecular techniques and bioinformatics.

Alumni Suggestions for New Courses/Topics

Add Bioinformatics, NMR spectroscopy, applied microbiology, industrial biotechnology.

Recommended Corrective Actions

- Include Bioinformatics and Data Analysis as compulsory course
- Add Applied Microbiology and Industrial Biotechnology modules
- Strengthen lab infrastructure with modern tools
- Update syllabus to align with CSIR-NET pattern

7.5 Mathematics & Statistics

Programmes	MSc (Maths), PhD	Respondents	8 alumni
Overall Score	3.68 / 5.00	Rating	Satisfactory

Parameter	Score (/5)	Assessment
Entrepreneurship	3.38	Average
Career Orientation	4.12	Good
Industry-Academia Gap	3.50	Satisfactory

Communication Skills	3.38	Average
Electives & Technology	3.88	Satisfactory
Analytical Abilities	3.75	Satisfactory
Adequateness of Courses	3.75	Satisfactory

Key Findings

Strengths: Career orientation and computer programming highly rated. Applied mathematics valued.

Weaknesses: Entrepreneurship and communication skills rated lowest. Insufficient CSIR-NET preparation.

Alumni Suggestions for New Courses/Topics

Add AI, ML, programming languages, Vedic Mathematics, research-based courses.

Recommended Corrective Actions

- Add AI and Machine Learning applications as elective
- Include Vedic Mathematics module
- Align content with CSIR-NET/GATE syllabus
- Add Python/R as compulsory skill courses

8.6 Mechanical Engineering

Programmes	BTech (Mechanical Engineering)	Respondents	6 alumni
Overall Score	3.21 / 5.00	Rating	Average

Parameter	Score (/5)	Assessment
Entrepreneurship	2.83	Below Average
Career Orientation	2.83	Below Average
Industry-Academia Gap	3.33	Average
Communication Skills	3.00	Average
Electives & Technology	3.50	Satisfactory
Analytical Abilities	3.33	Average
Adequateness of Courses	3.67	Satisfactory

Key Findings

Strengths: Core subjects (Machine Design, Thermodynamics, Fluid Mechanics) valued.

Weaknesses: Career orientation and entrepreneurship among lowest-scoring. Lack of interdisciplinary and practical emphasis.

Alumni Suggestions for New Courses/Topics

Add Mechatronics, Robotics, Additive Manufacturing, Sustainable Engineering, Data Science.

Recommended Corrective Actions

- Introduce Mechatronics and Robotics as electives
- Add Additive Manufacturing (3D Printing) lab

- Implement semester-wise mini-projects
- Organize mandatory internship (minimum 2 months in final year)
- Add soft skills modules each semester

9.7 Computer Science & Engineering

Programmes	BTech (CSE), MCA	Respondents	5 alumni
Overall Score	3.54 / 5.00	Rating	Satisfactory

Parameter	Score (/5)	Assessment
Entrepreneurship	3.40	Average
Career Orientation	3.60	Satisfactory
Industry-Academia Gap	3.20	Average
Communication Skills	3.40	Average
Electives & Technology	4.00	Good
Analytical Abilities	3.40	Average
Adequateness of Courses	3.80	Satisfactory

Key Findings

Strengths: Electives and technology orientation rated highest. Core CS subjects appreciated. Alumni placed at Bosch, TCS, etc.

Weaknesses: Industry tie-ups weak. Need for incubation hub and stronger placement cell.

Alumni Suggestions for New Courses/Topics

Add Emerging Technologies, Cryptography, Statistical Data Mining, full-stack development.

Recommended Corrective Actions

- Establish Technology Incubation Hub in collaboration with industry
- Add communication and aptitude skills as compulsory courses
- Build industry tie-ups for internships and placements
- Integrate cloud computing and emerging technology courses

4. UNIVERSITY-LEVEL CORRECTIVE ACTIONS

4.1 Immediate Actions (Priority)

- Zoology & Environmental Science: Introduce MTech Environmental Engineering; add GIS and ESG modules; address gender equity concerns
- Botany & Microbiology: Add Bioinformatics and modern molecular biology tools urgently
- Mechanical Engineering: Revamp curriculum with Mechatronics, Robotics, and mandatory internship

4.2 Short-Term Actions (Within One Academic Year)

- Integrate AI, ML, and Data Science electives across all STEM departments
- Make industrial internship mandatory for BTech and MSc programmes (minimum 2 months)
- Mandate NPTEL certification (minimum one per semester) for all BTech students with academic credit
- Establish university-wide Placement Cell with departmental student representatives
- Upgrade laboratory infrastructure in Chemistry, Botany & Microbiology, and Electronics

4.3 Medium-Term Actions (1–3 Years)

- Revise curricula of all BTech programmes to incorporate semester-wise project-based learning
- Develop MoUs with industry partners for internship, guest lectures, and real-world project collaboration
- Launch skill-based certificate programmes in Data Analytics, Digital Marketing, and GIS
- Introduce Research Methodology paper across all postgraduate programmes

4.4 Cross-Cutting Themes from Alumni Feedback

Theme 1: Practical Learning Deficit

Across departments, alumni consistently identified insufficient practical, hands-on learning as a major gap. Recommendations include lab upgrades, project-based semesters, industrial visits, and internships.

Theme 2: Emerging Technology Integration

Alumni from Engineering, Computer Science, Chemistry, Mathematics, and Management recommended integrating AI/ML, Data Science, Cloud Computing, Bioinformatics, and modern analytical tools into the curriculum.

Theme 3: Industry-Academia Alignment

The industry-academia gap is a university-wide concern (weighted average 3.38/5). Regular industry interactions, guest lectures by practitioners, placement cell strengthening, and MoU partnerships are strongly recommended.

Theme 4: Communication & Soft Skills

Communication skills training is valued across all departments, yet engineering alumni specifically requested more structured soft skills including personality development, presentation skills, and mock interviews.

Theme 5: Career Guidance & Placement

Alumni across departments expressed need for better career counselling, competitive exam preparation guidance (GATE, CSIR-NET, UPSC), and stronger placement cell activities.

5. DEPARTMENT PERFORMANCE SCORECARD

Department	Respondents	Overall Score	Lowest Parameter	Rating	Priority
Chemistry	16	3.92	Entrepreneurship	Satisfactory	Normal
Mathematics & Statistics	8	3.68	Entrepreneurship	Satisfactory	Normal
Computer Science & Engineering	5	3.54	Industry-Academia Gap	Satisfactory	Normal
Electronics & Communication Engineering	36	3.38	Industry-Academia Gap	Average	Medium
Mechanical Engineering	6	3.21	Entrepreneurship	Average	Medium
Botany & Microbiology	8	3.02	Entrepreneurship	Average	Medium
Zoology & Environmental Science	8	2.79	Electives & Technology	Below Average	High

6. CONCLUSION

The Alumni Feedback Survey on Curriculum (AY 2023-24) has provided valuable insights into the strengths and areas for improvement across the departments of Gurukula Kangri (Deemed to be) University. With a university-wide average of 3.44/5.00, the overall curriculum quality is in the 'Average' range, with significant departmental variation.

The IQAC recommends treating this report as a foundation for the Academic Council's curriculum review process. Corrective action plans should be formalized with timelines, responsibilities, and outcome metrics. Progress should be reviewed annually and reported in the Annual Quality Assurance Report (AQAR).

Report Prepared by	Internal Quality Assurance Cell (IQAC)
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